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OLDEST BEE-PAPER IN AMERICA

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REMOVAL NOTICE.

In order to get better accommodations, and for greater convenience, we have moved the AMERICAN BEE JOURNAL into a new office, at 56 Fifth Avenue, near the northwest corner of Randolph St. Our correspondents, and friends who may desire to call upon us when in Chicago, will please bear in mind our new place—56 Fifth Avenue.

Those Sugar-Honey Folks.—The following, which we have received from Dr. Miller, of Marengo, Ills., shows what he thinks of what has been said in the BEE JOURNAL about the sugar-honey folks and their proposed sugar-honey:

The "Old Reliable" seems not to be very strongly in favor of the sugar-honey business. In fact, if my knowledge of the English language is not at fault, it is decidedly "furnenst" the whole business. That's all right, and I'm with you. I like your attitude toward the business. But I don't like your attitude toward Prof. Cook and Editor Hutchinson. Or, rather, your seeming attitude, for I think I know all the parties well enough to know that both Mr. Newman and Mr. York count Messrs. Cook and Hutchinson as good, straight men.

And yet I am inclined to think that a stranger to the controversy, seeing for the first time a copy of the AMERICAN BEE JOURNAL, would understand that you both thought the two Michiganders very bad men. True, you say, Mr. Editor, that you do not believe any harm was *intended*, but the general reader is very likely to lose sight of that when he reads in the letters published such expressions as "nefarious swindle," "contemptible act," "advising adulteration," and the like.

Please, please, dear friends, don't let us lose our heads, and above all, don't let us lose our hearts, forgetting the "mantle of charity." Let us look at the matter dispassionately. But you say, "How can we look at it dispassionately when one of our own number clearly and distinctly advises adulteration at the very time we are making an effort to kill it?" But, my friend, no one advises adulteration, and are you not just a little previous in saying so? And then you reply, "Oh, well, I have no patience with such namby-pambying. Haven't they advised feeding sugar to have it stored? And isn't mixing sugar with honey, adulteration, no matter whether done with or without the intervention of the bees?"

Now, look here; don't go off at a tangent. Don't you know that everything depends upon the circumstances, and especially the motives. And to your last question I answer a blunt "No; not always. Hundreds of good bee-keepers have mixed honey and sugar to feed bees for winter stores, and there was no adulteration about it."

These brethren believed (and please don't forget that they two were not

alone in their belief) that when bees lick up sugar syrup and put it into cells, they so change it that it is honey just as much as if in place of sugar syrup they had had the nectar from white clover. Believing that, was there anything criminal in their saying it?

"But look at the results, actual and possible," you say. Yes, I admit they are bad, and they look worse to me now than they did at first. But I insist that the intent was good, no matter how mistaken. A townsman of mine gave to one of his children, by mistake, morphine instead of quinine, resulting in the death of the child, but no one viewed him with anything but pity, for there was no evil intent. Let us not fail to discriminate between errors of the head and errors of the heart.

Under the circumstances, it seems to me that Messrs. Cook and Hutchinson have done a manly thing in saying that if the mass of bee-keepers so desire they will say no more; for I'm afraid some of us would be so stubborn and mad that we would go on in our own pig-headed way, just so long as we could not see that we were in the wrong.

I think it is the wish of nearly all that the whole unfortunate business may sink into oblivion as rapidly as may be, and this will not be helped by bitter words. I don't know of anything better to do now then to let everything pass in silence, and all of us keep sweet.

C. C. MILLER.

When we read the foregoing we couldn't help saying, "Now that's just like our good Dr. Miller. He's so kind-hearted that he'd almost rather take a thrashing himself than to see some one else get it, whether the other fellow deserved it or not." We may be unfortunate, but we are "not built that way." When we have committed a wrong we expect to suffer for it, unless by showing sincere repentance we may be forgiven.

Now as to "Prof. Cook and Editor Hutchinson" in this sugar-honey affair —why, of course, we have always counted them as "good, straight men." We never had any reason to think them otherwise, until they attempted to defend sugar-honey production. When they switched off on that side-track, why they just "switched" while *we kept right on the main line.* We are not to blame for their "switching."

The Doctor intimates that it was an error of the head and not of the heart. He may be correct, but we certainly have not as yet seen any such admission on the part of either Prof. Cook or Mr. Hutchinson. The only statements we have seen are those they made in *Gleanings* for Jan. 15th, which are simply, in the main, a reiteration of former assertions that bees do make honey out of sugar syrup. Of course, Mr. Hutchinson says he will publish nothing more on the subject in the *Review*, and yet tells of another Professor who has sent him an article in which he sustains what has been published on the sugar-honey subject and says that bee-keepers who oppose it are ignorant, etc.! Mr. Hutchinson sent exactly the same thing to the BEE JOURNAL, but, of course, if he had taken a second thought, he would have known that we could not consistently publish it.

We can assure Dr. Miller, and al other kindly-disposed people, that just as soon as either Prof. Cook or Mr. Hutchinson are ready to do the manly act of admitting their mistake, and show a desire on their part to as far as possible right the wrong done (unconsciously and unintentionally it may be) the pursuit of bee-keeping—when they are prepared to thus do the "manly thing," why, the columns of the old AMERICAN BEE JOURNAL will simply fly open to receive them, and to help them to regain the honored positions they held a few months ago in the hearts of thousands upon thousands of bee-keepers all over the world. We bear no malice toward them, but feel that they have made a mistake that they should hasten to correct.

The Illinois Appropriation.—At the meeting with the State Horticultural Society Committee, it was decided that the bee-keepers go in with the horticulturists and dairymen in asking for an appropriation from the Legislature, for a World's Fair exhibit, and a Bill is being prepared to go in that way. So says Bro. Stone, the Secretary of the Illinois State Bee-Association.

The "Trowel Theory" of the Rev. W. F. Clarke, which some thought to have gone asleep, seems to be traveling around in a lively manner across the water. A correspondent of the *British Bee Journal* sends to that paper a clipping from the *Pall Mall Budget*, to this effect:

It will be a surprise to many to learn that, says a correspondent of the *Horticultural Times*, after all, the most important function of the bee's sting is not stinging. I have long been convinced that the bees put the finishing touches on their artistic cell-work by the dextrous use of their stings, and during this final finishing stage of the process of honey-making the bees inject a minute portion of formic acid into the honey. This is, in reality, the poison of their sting. This formic acid gives to honey its peculiar flavor, and also imparts to it its keeping qualities.

The sting is really an exquisitely contrived little trowel, with which the bee finishes off and caps the cells when they are filled brimful with honey. While doing this, the formic acid passes from the poison-bag, exudes, drop by drop, from the point of the sting, and the beautiful work is finished.

Whoever the "I" may be, in the above case, any one familiar with Mr. Clarke's "Bird's-Eye View of Bee-Keeping," will see a strange resemblance between the above paragraph and the note on page 60 of said book. The writer of the paragraph, however, has gone a step farther than Mr. Clarke, and assigned to the sting, the duty of *flavoring* the honey. This helps to clear up the sugar-honey question. As the flowers have nothing to do with the flavor of honey, the flavor being given by the sting, find out the condition of the sting when clover or buckwheat honey is stored and by getting the sting in the same condition when feeding sugar, you will have respectively clover or buckwheat honey. And so of honey of any other flavor.

Evidently the editors of the *British Bee Journal* have not carefully read Mr. Clarke's book, for they say the "trowel theory" was started "as a pleasantry, no doubt."

When Bees Need Feeding.—Often we receive questions for the "Queries and Replies" department which should be answered sooner than they would be if allowed to wait their turn. Again, questions are asked that can be as satisfactorily answered by one person as if twenty or more replied to them. The following query we think comes under the two kinds we have referred to, hence we give it here with a reply:

How can you tell whether or not bees need feeding? C. G. R.

The question, doubtless, refers to bees in winter quarters. As a rule, there should be no need for such a question to arise, for bees should go into winter quarters with more than enough stores to carry them through, so that there need be no attention paid to the matter until spring.

Still, there always have been, and probably always will be, cases in which there is danger that certain colonies may exhaust their stores before leaving winter quarters. If, among 100 colonies, there are two or three that need feeding, and you don't know which two or three they are, but must overhaul the whole hundred to find out, then if they are in the cellar it may be best to let them entirely alone and run their chances, but if out-doors, and a good, warm day comes in which they fly freely, you can look to them.

You will tell whether they need feeding in winter just as you would in summer, and that is by actual inspection. Lift out the combs and see whether they contain honey, but be sure that you don't touch them when it is too cold for the bees to fly. In the cellar, if absolutely necessary, you can examine them at any time, disturbing the bees as little as possible.

If, on glancing over the tops of the combs without lifting them out, you see quite a little sealed honey near the top bars, there is no immediate danger.

Have You Read page 133 yet

MR. ADAM GRIMM.

As variety is said to be the "spice of life," we must have a little of it in our biographical sketches; so this week we present to our readers the picture and account of the late Adam Grimm—the man who made money by keeping bees. Though not living, the following sketch will serve to show what Mr. G. did in the line of honey-production 15 or 20 years ago, and what may again be accomplished when good seasons once more shall smile upon those engaged in bee-keeping.

Dr. Miller, in that unequalled "A B C of Bee-Culture," says:

Adam Grimm was born in Germany, in 1824. His father kept a few hives of bees, in which Adam took deep interest, and did not rest satisfied until he himself became the owner of a few colonies. He emigrated to this country in 1849, settling at Jefferson, Wis., on a farm where he remained until his death, which occurred April 10, 1876. Soon after settling at Jefferson he obtained a few colonies of bees, and was so successful with them that at one time, when all other crops failed, his bees came to the rescue and helped him over the most critical time of his life.

In 1863 he had increased his apiary to 60 colonies of black bees, in all sorts of box hives, and in 1864 he commenced to use frame hives, and transferred all his bees into them. In the same year, 1864, he bought his first Italians, and, as rapidly as possible, Italianized his apiary, and then sold large numbers of Italian queens all over the country.

About 1869 or 1870 he imported, personally, 100 Italian queens, 60 of which were alive on their arrival at New York. Of this number he introduced 40 in his own apiaries. He increased his colonies regardless of cost, every year, but had larger returns, especially in late years, both from the sale of honey and bees. Queen-rearing he thought unprofitable. He had an intense enthusiasm in the business, and worked so hard in the apiary as probably to shorten his life. His success was the cause of many others engaging in the business.

He established a bank at Jefferson, of which he was cashier (his bees having

ADAM GRIMM.

provided the capital); but during the honey harvest he left his bank to the care of employes, and went from one apiary to another, personally supervising all that was done.

We shall not soon forget two or three pleasant visits which we made at his home, with his interesting family. He told us his wife remonstrated with him for working so hard, telling him that he now had a competence, and could give up his bees with the laborious care of so many; but he seemed to think the returns were larger for the amount of labor, making the work still a pleasure, although no longer a neceessity. He

reached the number of 1,400 colonies; and on one of our visits, when he had nearly 1,000 colonies, he said, with a half-comical expression, "What would I do if all should die in the winter?" And then, the comical look giving way to one of German determination, he said, "I would buy some more; and with so many hives full of empty comb, I would show you how soon I would fill them up again."

His daughters, Katie and Maggie (both since married), were his able and faithful assistants; and the son, George, since his father's death, has assumed the principal care of the bees, for which he is well fitted by his previous training.

Mr. Grimm was trim-built, of medium size, pleasant in manner, but especially impressing one as of great earnestness. He was very methodical, and kept an exact account of his business, showing, in a single year, $10,000 as the result of his bee-keeping.

Sugar-Cane Syrup for Wintering Bees.

Query 856.—1. Is sugar-cane syrup good to winter bees on, if they are wintered in the cellar? 2. If not, will it do for spring feeding?—Minnesota.

1. Yes. 2. Yes.—C. C. MILLER.

1. Yes. 2. Yes.—DADANT & SON.

1. Yes, undoubtedly.—EUGENE SECOR.

1 and 2. I do not know.—JAS. A. STONE.

1. Yes, but do not feed it if the least bit sour.—W. M. BARNUM.

1. In this I have had no experience. 2. Yes.—J. M. HAMBAUGH.

Bees will winter well on *pure* sugar syrup, but they breed up better on honey.—P. H. ELWOOD.

I think sugar-cane syrup made from granulated sugar is good bee-food at any time and place.—E. FRANCE.

It makes good winter and spring food. I prefer the addition of one-fourth good honey for winter use.—H. D. CUTTING.

1. I have never tried it, but should say it is not. 2. It would probably do for spring feeding.—MRS. L. HARRISON.

1. Yes, if it is made from granulated sugar. 2. Any that the bees would readily take would do for spring feeding.—R. L. TAYLOR.

1. I do not know what you mean by "sugar-cane syrup." If you mean syrup from sorghum, I must answer no to both questions.—M. MAHIN.

1. Yes, sir; better than any honey, if properly prepared. 2. Honey is the best when the bees are breeding and can fly frequently.—JAMES HEDDON.

1. No; use syrup made from the best granulated sugar for winter feeding. 2. Almost any kind of sweet food will do when they can fly.—MRS. J. N. HEATER.

1. I never wintered any bees in the cellar. 2. Almost any kind of syrup that bees will use can be fed in the spring with safety.—MRS. JENNIE ATCHLEY.

I should be afraid to try it where you live—even as far South as I live (Georgia) I have found it a poor substitute for honey or sugar syrup.—J. P. H. BROWN.

1. If cane molasses is meant, no. Syrup from granulated sugar is equal to good honey for feeding. It may do for spring feeding if bees will use it.—C. H. DIBBERN.

1. Yes, if you mean clarified syrup made from Southern cane, or by melted granulated sugar. 2. No, if you mean sorghum or crude from any kind of cane.—S. I. FREEBORN.

1. I do not think it is. I should use nothing but the best granulated sugar. 2. Syrup will answer well enough in the spring, or at any time when the bees can fly out.—J. E. POND.

Fifteen pounds of water put into a vessel of suitable size and brought to a boil, then slowly stir in 30 pounds of granulated sugar and bring the whole

to a boil, after which set from the fire and stir in 5 pounds of honey, gives 50 pounds of as good food for bees to winter on as anything I know of. Would you call this "sugar-cane syrup?" If not, what would it be?—G. M. DOOLITTLE.

Pure cane-sugar syrup is the best food for bees in the winter, in-doors or out. If you mean unrefined sorghum syrup, it is entirely unfit for winter food, though it would do very well for spring feeding—JAMES A. GREEN.

1. I should prefer to transpose the words "sugar cane," for I know "cane sugar" is to be relied upon. 2. Almost anything saccharine will do for spring feeding, provided it is wholesome and acceptable to the bees.—J. H. LARRABEE.

Sugar-cane syrup is all right for spring feeding, but in my own experience, both in cellar and out-door wintering, the natural stores are better. The principal reason was that earlier breeding was promoted by the natural stores, and hence stronger colonies for the harvest.—G. L. TINKER.

Sugar syrup fed to bees and transformed is super-excellent for winter stores. I should prefer to feed it in the fall so as to have it transformed into honey. Fed in the winter might not be as safe. I do not know. In case of necessity I should not hesitate to try it. It is certainly all right in the spring.—A. J. COOK.

The sugar-cane syrup that we used here, many years ago, when re-boiled and prepared, would winter bees safely in this climate (Kentucky). But the stuff I see under this name now-a-days ought to kill any living thing that would venture to swallow it. The best sugar is nearly as cheap, and is quite safe as a winter and spring food when honey is scarce.—G. W. DEMAREE.

Please Don't send to us for bee-keepers' supplies. We do not deal in them. If in need of anything for the apiary *except a good bee paper or book*, just send for the catalogues of some of our advertisers. They will be glad to fit you out, and do it well.

Have You Read that wonderful book Premium offer on page 133?

CONDUCTED BY

Mrs. Jennie Atchley,

GREENVILLE, TEXAS.

Busy Bees and Spring Birds in Texas.

We are dipping cells and starting queens to-day. The weather is fine, with bright sunshine every day. Garden making is the order of the day. Bees are working nicely, and spring birds singing sweetly. Oh, how happy we ought to be! JENNIE ATCHLEY.

Greenville, Tex., Jan. 24, 1893.

The "Nameless Bee-Disease."

Is it not possible that we have two diseases compounded in one, in the so-called "nameless bee-disease?" I think we have, from the fact that most of the writers, in speaking of the disease, say that the workers become slick and shiny from the loss of hair on their bodies, and that they have a nervous or tremulous movement of the wings, etc. But with the disease we have here, none of the slick, shiny, hairless bees are to be seen, and they do not have the tremulous motions spoken of above. In the first case spoken of, they are usually affected more in early spring, and late in the fall than at other times; but in the latter case, they never show it until hot, dry weather begins. In the first case they seem to dwindle along and die off about as fast as the young bees hatch. But in the latter they just die by the wholesale—a strong colony dying out in a few days. They seem to have their natural size and appearance in every way except a few that seem to have their abdomens somewhat swollen.

When a colony first becomes affected its bees will almost stop work and hang in a cluster on the front of the hive, with only now and then a bee attempting to leave the cluster apparently to work; but being unable to fly they crawl off and soon die in the hot sun. At this stage of the disease, the brood and

young hatching bees seem to be healthy and all right, but as the disease advances all of the unsealed brood dies, either from the disease or starvation, and I am unable to tell which; but I am of the opinion that it is for the lack of food, for it seems that the nursing-bees are unable to secrete or prepare food for them. But when the disease reaches this stgae, the old bees will be dying by the thousand. Sometimes the whole colony will die and leave the combs filled with sealed honey, and a good supply of pollen; at other times they will all die except the queen and a mere handful of young, downy workers. Then they get well and build up to good colonies, without any remedy, or any help whatever.

I sent Prof. Cook a cage of sick bees, describing the disease. His reply is as follows:

"I think this the worst form of a bacterial or microbe malady that is becoming worse and worse. I think the Government at Washington would take it up. Suppose you send the enclosed notes to Hon. Edwin Willits, Department of Agriculture. Tell him that I say it is a microbe, and ask him if the Bureau of Animal Diseases will take it up if you will send diseased bees."

I at once wrote to Mr. Willits what Prof. Cook said, and here is a part of his reply:

"The Department apiarist, to whom the matter was referred, thinks from your description that Prof. Cook is quite right in supposing it to be due to some microbe. But, of course, only an extremely careful microscopical examination of freshly dissected bees would determine which of the numerous microbes known to produce disease in bees, this one is, or whether it may not be a new one not yet identified and figured. Such an examination might be undertaken by this Department, if you would send in live specimens of the diseased bees, etc."

This I did, but perhaps it would be nothing but fair to state before giving their reply, that all the worst cases had got well or died before I could send them any sick bees. So the ones I sent were only slightly affected. Here is their reply after receiving the last sample:

"Your letter, and also a cage of worker bees, are received. No bacteria were found in the tissues or juices taken from these bees alive, and an effort was made to obtain tuberculosis from these by inocculation. But the tubes remained perfectly clear, thus proving the absence of bacteria, and hence no trace of disease due to the latter. Material taken from the abdomens (which were much swollen) of some of the workers that arrived dead, showed under the microscope numerous bacteria, none of which, however, could be recognized as bacillus alvei (foul brood) or bacillus gaytoni (dipilis) the cause of the nameless bee-disease. Probably they were only such as usually develop in the dead tissues of bees, or in the bowel contents of dysentery specimens. In an examination of this kind it is necessary to simplify the matter as much as possible by removing all the other causes tending to produce diseased conditions, and as in the case of the bees arriving dead, indications of dysentery were present—swelled abdomens and bowels filled with a brownish liquid; also cage soiled. It seemed useless to experiment further with them," etc.

Further on in the same letter he says: "As indicated in the answer to your other letter, the remedy most likely to prove effectual is that of replacing the queens of the diseased colonies with those of different blood." That I have done, but all to no purpose. I now have queens to breed from procured from three different States, but it seems to make no difference, all suffer alike with the disease, and I shall call it "bee-cholera" until I learn a better name for it.

L. B. SMITH.

Iometa, Texas.

The Ninth Annual Meeting of the Wisconsin State Bee-Keepers' Association will be held at the Capitol, at Madison, on Feb. 8th and 9th, 1893. C. A. Hatch, of Ithaca, is President; H. Lathrop, of Browntown, Recording Secretary; and Dr. J. W. Vance, of Madison, Corresponding Secretary.

Annual Catalogues or Price-Lists we have received from—

Levering Bros., Wiota, Iowa—Bee-Keepers' Supplies.

E. T. Flanagan, Belleville, Ills.—Bees Keepers' Supplies, Bees, Queens, etc.

W. H. Norton, Skowhegan, Maine—Bee-Keepers' Supplies, Bees and Queens.

John Nebel & Son, High Hill, Mo.—Bee-Keepers' Supplies, Italian Bees and Queens.

G. B. Lewis Co., Watertown, Wis.—Bee-Hives, Shipping-Cases, Sections, Frames, etc.

Report of the North American Bee-Keepers' Convention.

Written for the American Bee Journal

BY W. Z. HUTCHINSON.

(Continued from page 114.)

Next came an essay by Mr. E. R. Root, of Medina, Ohio, upon

Self-Hivers and Their Use.

Up to about a year ago I took but little interest in self-hivers. They seemed to me to be too complicated, too expensive, too everything, in fact, to be available and practical for bee-keepers. So far, they would hive only a third or a half of the bees, and they were, therefore, but little better than a complete failure, for nothing is a success that is only half a success.

At the previous meeting of this association, however, which assembled at Albany, Mr. E. L. Pratt, of Marlboro, Mass., after one of the sessions, drew me to one side, and showed me specifications of his new automatic hiver. Unlike all previous arrangements for the purpose, the bees entered into a new hive on returning from the air, the entrances to which they had long been accustomed. This struck me at the time as being a vital point, and possibly the key to future success. The trouble with the former self-hiving devices that had been brought out was, that the bees on returning, if they followed their queen, which it seems most of them did not, would have to go to a *new* entrance and to a new hive.

Those of us who have had experience in handling swarms with clipped queens' wings, will remember how readily the bees will return to the hive on discovering the absence of their mother; and it is nothing strange that they should rush pell-mell into the *old* entrance, thinking, of course, that she must still be in the hive. It would not matter particularly whether the queen had gone through the perforated-zinc passage-way to another hive—the majority of bees would go to the old place, just the same.

Mr. Pratt, realizing the above fact, placed a new hive that was to receive the swarm, in front of the old one, in such a way that the bees going to and from the field would pass through the new hive into the old one. A set of combs was placed in the former, and a sort of bee-escape was arranged in connection with the perforated zinc in such a way that the queen could readily pass into the new hive, but not back again; and when in the new hive she would be debarred from passing out at the entrance by the perforated zinc. Thus, when a swarm should issue, the bees would fly out in the usual way, and the queen, following or preceding, would enter the new hive, and there be entrapped. The bees remaining out for a few minutes would soon discover the absence of their queen, and return to the old entrance, and, behold, the queen would be in the new hive. From some preliminary trials that Mr. Pratt had been able to make the previous season, he found that the plan worked successfully, and that all of the bees remained in the new quarters.

I told Mr. Pratt, at the time, that this was the only self-hiver that I ever took any fancy to, and that I believed the principle of having the bees go back to an old entranoe, and to which they had long been accustomed, was the key to success.

The following summer, we rigged up some 10 or 15 hives, on the principle before stated; and although I was sanguine of success in the very beginning, the result greatly exceeded my expectations. If I remember correctly, there was not a single failure. The colonies were not only automatically hived in every case, but they went to work in their new quarters, building comb, storing honey just as they would have done had they been hived in the old-fashioned way in a new location.

By way of experiment, some of the colonies were left from three weeks to a month, to see what the final result would be. Young bees hatched in the parent colony, and finally began to add their numbers to the swarm. The latter, in the mean time, went to storing honey to the extent of 50 or 60 pounds in two or three instances; and one in particular had stored it to the phenomenal amount, for these poor seasons, of 150 pounds.

Most of the colonies mentioned above were arranged a little differently from what Mr. Pratt originally designed, but not so as to change the essential principle of allowing the bees to go to an entrance to which they had long been ac-

customed. The new hive to receive the swarm, instead of being placed in front of the old one, was placed below. This simplified the arrangement to the extent that it required only one bottom-board, and made it less difficult to adjust the hives so as to be perfectly bee-tight as far as communication from one hive to another was concerned.

The plan that we used so successfully was this: The old hive-body was taken temporarily off from the bottom-board. Another body, precisely like the other, was set in its place. Into this was put a full set of empty combs. On top of this was then placed a board having a couple of holes, on the under side of which, and communicating with said holes, was a sort of queen-escape, made of perforated zinc, like the sample I herewith show you. This is so arranged that the bees can readily pass up and down into either compartment of the hives; but the queen can pass only one way, and that downward; and having gotten into the lower hive she is prevented from getting out into the air by means of perforated zinc. When preferred, the queen's wing may be clipped, and the zinc omitted at the entrance.

The mode of operation is simple. The bees, in working, pass through the new hive not yet occupied, crawl up into the hive above, through the perforated zinc. This seems as if it might be an objection in that the bees are compelled to travel so far before entering the hive proper. This objection exists more in imagination than in actual practice. In a few days, the swarm issues; the queen, being below, is trapped; the bees return, and finding their queen below, seem to accept their new quarters as their new abode. This, in brief, is the Pratt method of self-hiving.

I am not prepared to say that the Pratt automatic hivers will prove to be as successful in the hands of others, because bees do not always follow an invariable rule, especially when their owners try to make them do just as they plan they ought to do, or as they do for others under like circumstances; so it will probably take another year or so before we can speak definitely with regard to its success in the hands of bee-keepers in general.

But an implement may be a success, and yet not be practical. This may be the case with the automatic hiver. At present I fear they are rather too expensive to be used generally by bee-keepers, even if their success as to actual operation is assured. Bee-keepers cannot afford to pay more for self-hivers than it costs to hive swarms in the old-fashioned way. By a little more experimenting I am in hopes that their mode of construction may be simplified enough so as to permit of their general use.

Automatic hivers are old—very old—in principle. Mr. H. A. King used a device that was very similar in principle to the automatic hivers of to-day. But as he did not then have perforated zinc, it could not be made to work successfully.

The late Moses Quinby also used a similar device. Henry Alley, I believe, was the first one to revive the idea of any connection with perforated zinc. Although his was the first, it seems not to have been a complete success, as it hived only a part of the bees—at least I judge so from the reports I have received.

Mr. E. L. Pratt took one step further, and gave us the automatic hiver which I have described here to-day. It remains for some one else now to make it cheaper; and, last of all, for some enterprising editor—if they are a success—to get bee-keepers to use them.

ERNEST R. ROOT.

Frank Benton—I fear that in counting the cost of the hiver, Mr. Root forgets that a hiver lasts several years. It lasts as long, or longer, than a hive. The cost is but little more than the interest on the money.

W. Z. Hutchinson—At our late Michigan State Convention, Mr. Heddon said that as soon as a hiver was brought out that was practical and successful, he would put one on every hive, though they cost as much as hives. The great cost, in his estimation, in the production of honey, is the labor, and any arrangement that will allow a man to manage his bees without constant attention will eventually be adopted, even if it does cost something. Instead of a trap at the entrance, Mr. Heddon would use a queen-excluder under the hive.

R. F. Holtermann—The honey-boards would be needed for other purposes at that time.

E. R. Root—One objection to the use of honey-boards under the hive is that they become stopped up by the drones getting their heads fast in the zinc and dying there, and there is no way of removing them without lifting up the hive. When an entrance-guard becomes stopped up in this manner, a stick can be run over it in a "jiffy," and the drones' heads rubbed off, and thus the entrance is kept clear.

W. Z. Hutchinson—Mr. Heddon's objection to an entrance-guard is that it interferes with the ventilation of the hive. I might say that at this same convention, Mr. R. L. Taylor said that he could manage very well without self-hivers. He used simply a queen-trap. If the apiary is visited once in three or four days, the colonies that have swarmed can be picked out by finding a queen and a bunch of bees in the trap of a colony that has swarmed. He then divides those that have swarmed.

R. F. Holtermann—A queen might be injured by a cold rain if left in the trap three or four days.

W. Z. Hutchinson—Mr. Taylor says that there is quite a little bunch of bees remaining with the queen, and that he has had no losses from this source.

Next came a long and exhaustive essay by Mr. Frank Benton, of Washington, D. C., on

Varieties of Bees and Their Characteristics.

It is now nearly 20 years since I called attention, through the apiarian periodicals, to the important work of Mr. Edward Cori, then a director of chancellory in Bohemia, in the introduction and testing of various foreign races of bees, some of them little known, and others entirely new. And shortly after the first mention of this work of his, I translated several lengthy articles written by him bearing on the subject. These may be found in the *Bee-Keepers' Magazine* of New York city, for 1876. Other notices from various foreign journals were given from time to time by me, and in 1878 I gave a review of the subject of foreign races of bees before the Michigan State Bee-Keepers' Association.

Again, in the autumn of 1879, I had the honor of presenting to the North American Bee-Keepers' Association assembled in Chicago, an extended notice of the remarkable race of bees native to the Island of Cyprus. A few months later my interest in the subject led me, in connection with Mr. D. A. Jones, an extensive and capable Canadian beemaster, to undertake a journey to the Old World for the purpose of investigating the various races of bees which had come into prominence, as well as to discover others still unknown, if such existed, and in case these new races seemed valuable, to import them to our own country.

To many of the older members of this society the facts are familiar, as recorded in numerous articles in the bee-papers, that we sailed in January, 1880, on this long journey, made visits among many of the prominent bee-keepers in various countries of Europe, initiated the work of queen-breeding in Cyprus, Syria, and Palestine, and also that Mr. Jones returned to America a few months after, bringing with him Cyprian, Syrian and Palestine bees, while I still remained in the Orient.

One of the conditions of the contract with Mr. Jones was that the qualities of these new races should be represented to the American public exactly as they seemed to be, and that unless, as far as could be discovered, a given race was more valuable than the bees we then possessed it should not be offered for sale. Mr. Jones had exclusive control of the sales in the United States and Canada. I answered such calls as came from the continent of Europe, and after Mr. Jones left England on his return trip in June, 1880, those that came from the British Islands also.

Many of those present have also done me the honor of following me, through the published accounts, imperfect though they were, of the long journey to India and the perilous search in the jungles for the famous *Apis dorsata*—the Giant East India bees of which such mythical tales had come to us. And though it is true that the illness which was the immediate cause of my failure to get the bees here alive, resulted from an over-estimate of my powers of endurance, I am really more pleased at presenting for your inspection dead specimens of *Apis dorsata* than these respectable bees would likely have been over my demise had they compassed it.

Mr. Jones, who it will be remembered returned to America after spending about three months in the East, did not visit the Orient again, although he remained connected with the work. But when, at the close of 1882, I found myself obliged to leave the East, on account of the effect of the climate on my health, he severed his connection with the undertaking.

During the following years, with headquarters in Munich, Germany, most of the countries on the Mediterranean sea were visited, some of them repeatedly, and stays of a few weeks or months made. The races of bees native to each country were studied and experimented with in their own land, and in each instance queens were taken with me to other countries in order to test their

progeny in direct comparison with other races, and also to secure certain known crosses for experimental purposes.

Thus eleven years were passed in foreign lands during which I recall that once for a period of four years in succession I heard no word of my mother tongue spoken outside of my own family.

It is but just that I should mention that the constant sharer in this long exile and in these undertakings, their pleasures and hardships (generally too many of the latter), has been my devoted wife. She often took charge of an apiary and received and cared for the valuable queens from distant countries, introducing them and preparing and shipping them on long and difficult journeys. It was her skill in this direction which landed in fine condition the first queen-bee that ever made successfully, by mail, this long journey from Europe.

And since misapprehensions regarding the possible returns from such work have arisen, and have often been alluded to in print, it is quite proper to mention here that it is safe to say that one-half the effort and expenditures put into queen-rearing at home would have yielded a far better income, in fact; though I come back with more than a decade added to my years, and, I trust, correspondingly richer in experience, it is poorer in pocket and in health than when I sailed from my native land, and this even though the bee-keepers in many European countries extended to the undertaking a patronage hardly anticipated in the beginning. But as the work was not undertaken on my part with the expectation of money-making, I could only be disappointed in this direction, in so far as the returns were not equal to the expenses.

FRANK BENTON.

[Here is as far as Mr. Benton had his essay in manuscript. The description he gave *extempore*. I supposed it was all written, hence I took no notes, but Mr. E. R. Root, of *Gleanings*, did, and he has kindly sent me proof of what he took down, having first submitted said proofs to Mr. Benton. Here follows the correct version as approved by Mr. Benton.—W. Z. H.]

Although long, it was one of the most entertaining talks that we believe we ever listened to at any convention. Mr. Benton began his address by giving a description of the general characteristics of black bees; but as these bees are so well known, we will not reproduce his remarks here.

THE BEES OF ITALY.

Next he took up the Italians. These were introduced into the United States in 1860 by Mr. S. P. Parsons, acting for the Department of Agriculture, as the Government records showed. It was generally stated in the text-books that Italian bees were first introduced into the United States by Wagner and Colvin acting together, and Mahan independently. They were actually the first to land Italians on our shores, but not queens bred in Italy, nor was it from their importations that the country was stocked to any great extent with Italian bees. Their first consignments, which arrived alive, came from Germany in the fall of 1859, Mr. Mahan, to whom too little credit has been given in this connection, having charge of them. The Wagner and Colvin queens were all lost during the winter, which was near at hand when they arrived. Nor had the Mahan importation been multiplied before the arrival in May, 1860, of the consignment which Mr. Parsons had, in 1859, been commissioned by the United States Department of Agriculture to purchase in Italy. And it was chiefly from this importation that Langstroth, Cary, Quinby, and other skillful breeders multiplied the race in this country.

Then turning to the general characteristics and markings of the Italians, Mr. Benton gave a very fair description, which I also omit. Italians were, he said, to be found in their greatest purity in the region having Bergamo and Brescia on the north, Montua and Modena on the east, the Ligurian Appenines on the south, and Pavia and Milan on the west. He also found the bees in Genoa well-marked, likewise those in Leghorn, Florence, and other parts of Tuscany, and in Rome. Perhaps it may be interesting to note right here, that the Italians which we have been importing to this country for many years have been coming from the vicinity of Bologna, which is just to the southeast of the region first mentioned by Mr. Benton.

CARNIOLAN BEES.

Of these Mr. Benton had the most to say. They were dark in color, somewhat of a steel gray, but quite different from the black bees. As to size, they were a little larger than the Italians; were excellent honey-gatherers, sealed their honey white, good wax-producers, and collect little or no propolis. They

were very prolific, but not so much so as the Eastern races, and the gentlest bees in the world; in fact, in this respect, no other bees could be compared with them. During the whole four years that he worked with them in their native country, he wore no veil, and yet handled hundreds of colonies, even manipulating the combs of strong ones late into the night.

Carniolans could be readily shaken from the combs, and this feature made it possible to find the queens very readily by shaking all the bees out of the shallow brood-chambers such as were used and had been used for a century or more in Carniola. In fact, it is the way the natives usually find the queens. Carniolans could be shaken from their combs, and not fly up and resent it as Italians would sometimes do. They were not lacking in courage, but the loss of a queen affected them greatly.

At first Mr. Benton thought they were rather given to robbing; but later he found they were no worse than other bees. On account of their capping honey so white, and their gentleness, Mr. Benton felt that the Carniolans were the best bees for comb honey.

Referring to their demerits, he acknowledged that they were rather inclined to swarm; but this trait had been encouraged in them for centuries. The native bee-keepers in Carniola practice a method where excessive swarming seems desirable. Their inclination toward excessive swarming is simply a trait that has been bred into them; and Mr. Benton thought that the same trait could be bred out, or at least held in subjection here in America. It would be foolish for Americans to reject them solely on this ground; and while the Carniolans have many valuable traits, he did not think that they would entirely replace the Italians.

DALMATIAN BEES.

These bees were found on the east coast of the Adriatic sea. Their bodies are rather slender, and are shiny blue-black in color, with lightish fuzz. In qualities they are similar to Carniolans, being prolific, excellent honey-gatherers, and builders of very white combs, though not quite so gentle as the latter. It would be desirable, he thought, to introduce them into this country, and study and test them more thoroughly.

THE ATTIC, OR BEES OF HYMETTUS.

These bees were found in the plains of Attica—probably the same race of bees that gathered honey for the gods. They no doubt now gathered the same honey, of the same quality that they were reputed to have done in ancient times; but as the native bee-keepers put the honey in goat-skins, Mr. Benton did not think he would like to be one of the "gods." The Hymettus bees look very much like Carniolans, and their movements are the same; but they are very cross, notwithstanding they are good honey-gatherers. They used more propolis, and were great breeders.

Mr. Benton here related an incident of a case where he had the Attic, or bees of Hymettus, in an apiary alongside of Carniolans. He had been handling Carniolans, and by mistake opened a hive of the Hymettus bees, treating them as he would Carniolans. The result was, that they poured out in such numbers that he was driven precipitately from the apiary. These and certain other bad qualities would make them rather undesirable for importation to this country.

CYPRIAN BEES.

These were reared on the Island of Cyprus, and were rather peculiar on account of their isolation. They were kept in mud cylinder hives; movements were very quick—so quick, indeed, that they might flit on one's nose. As to their honey-gathering qualities, they exceed all other known races; will often gather honey when others are doing nothing. The cappings of their comb honey have a rather watery appearance, and therefore they were not suited for *comb* honey. They were prolific—more so than the Carniolans.

Right at this point Mr. Benton wished to emphasize the fact that it was not a bad thing to have bees extra prolific, because an intelligent bee-keeper—one who knows how—could always turn this quality to good account.

As to the temper of Cyprians, they feared nothing. Great quantities of smoke would not subdue them; in fact, the more they were smoked, the worse they became. They were very sensitive to light; and hence on opening a hive it must be done gradually. By working cautiously, using, of course, a veil, and a slight amount of smoke, he could get along with them very well. They winter better than the Syrians and Palestines.

For *extracted* honey, he believed they were the best bees in the world. If honey were to be extracted it would make no difference whether the cappings

were water-soaked or otherwise. As the swarming disposition has been bred into the Carniolans, so vindictiveness has been bred into the Cyprians on account of their natural environments. Wasps were their natural enemies on the Island of Cyprus, and Mr. Benton had known them to pounce upon the weakest of the colonies, and so decimate their number as to end finally in their utter anihilation. Mr. Benton regretted that the Cyprians were not now to be had in this country, and thought they had been discarded prematurely. He believed that they should be kept in their purity or crossed with Carniolans, as their crosses with blacks were evidently undesirable.

TUNISIANS, OR, AS SOME HAVE CALLED THEM, PUNICS.

These, Mr. Benton said, were found from Tripoli, Africa, westward. He had reason for thinking they were the same bees that were to be found on the island of Minorca. They had been originally imported to France, and all that region; and on the Island of Minorca they had been isolated. The Tunisians resembled most our black bees. They were much darker, however, and smaller than these. They fly quick, are excellent honey-gatherers, active, good comb builders, and cap their honey fairly well; but they were the worst gatherers of propolis of any bees known, and would sometimes close up their entrances to narrow passage-ways with propolis, leaving little pillars between the holes. Indeed, the amount of propolis they will gather is so much that they are unsuited for comb honey, because they daub the cappings with it so much. They were vindictive, and probably for the same reason that Cyprians are so; namely, on account of their inveterate enemies—the wasps.

The Tunisians, when aroused, are ten times worse than Cyprians—worse even than Syrians and Palestines, and besides stinging they bite. Mr. Benton thought the introduction of them into this country was detrimental to the best interests of bee-keeping. As Mr. Benton has thoroughly studied their habits in their native clime, taken them from Tunis with him and bred them in other countries for several years, and has also sent imported queens of this race to apiarists in various European and Asiatic countries, these statements may be taken with some degree of authority.

APIS FLOREA.

These bees—the smallest of the genus *Apis*—build in the open air, their single comb being attached to the limbs of trees. There can be nothing expected from them, as they are so small, and are quite disposed to migrate.

APIS INDICA.

These were very small and pretty five-banded bees; and as they could be kept in hives, he thought they might be worthy of a trial. They were so small they might be well adapted to the small flora of our country, without detriment to our other bees, since they would gather honey from some blossoms which the ordinary-sized bees do not.

APIS DORSATA.

This was a very large bee; general color smoky black, abdomen having three deep orange bands; wings blue-black, and shone in the sunlight; workers were about the size of our queen-bees. Their movements were very different from that of the ordinary bees, and, if disturbed, they whiz from the combs like hornets. They were excellent gatherers of honey, and of good quality, and their wax was produced in such quantities as to make an important article of merchandise. The combs, usually only one, were about five feet long, hang from the limbs of trees. If, as sometimes happens when they build in rock cavities, they have more than one comb, the secondary combs are attached parallel to the central or main comb, one on either side, and not as commonly illustrated in one of the bee-papers, showing several combs attached to one limb. The worker-cells of the *Apis dorsata* were about the size of the drone-cells of our bees, and the drones of *Apis dorsata* were reared in the same cells as the workers. They looked like drones, having a blunt appearance, not differing greatly from drones of *Apis mellifica* from our drones.

The vindictive power of these bees had been greatly exaggerated. They were not particularly cross, and could be handled and kept in hives. Mr. Benton secured some of the bees and found they could be successfully kept in hives. Circumstances were such (a serious illness from exposure having befallen him) that he could not make the observation of their general characteristics that he desired, but he found that they were slow to repair combs that were broken. So awkward were they in stinging that by a quick brushing movement the sting could easily be averted, and even when they were successful in accomplishing their object, the wound was not as painful as from other bees.

Mr. Benton thought it desirable to import and test them here, for, though it is quite possible they might not prove of *direct* value in domestication, and therefore private enterprise should hardly venture upon the work of getting them, the possibility of beneficial results to the apiarian and agricultural interests of the country through their introduction, make the work something which he thought the government might very properly undertake.

A. I. Root—Wherever there is Syrian blood, there is trouble in handling the bees. I know that smoke often makes them worse. There are apiaries in California where it is understood that no smoke is to be used.

R. F. Holtermann—I think that what Mr. Benton says is correct. But this trait of the Syrians of defending themselves is so great, and passes on from one generation to another—is so hard to eradicate—that it ought to be avoided.

Frank Benton—*Apis dorsata* is not looked upon as valuable for a cross. What would be the result of their introduction, I cannot say. Their sting is not so severe as that of the ordinary bee. They are also more clumsy. They can be brushed off before they sting, if the bee-keeper is just a little spry about it.

R. F. Holtermann—Do the drones fly at a different time of the day from other drones?

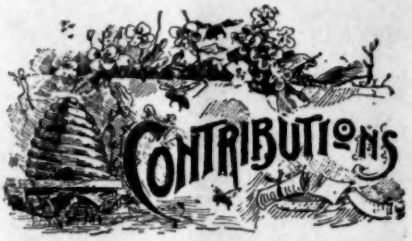
Frank Benton—I do not know. I know that they fly just at dusk, when the workers are still, but they may fly at other times.

Prof. Riley—While the matter is problematical, I think that *Apis dorsata* would not cross with our ordinary honey-bees.

(Continued next week.)

Mr. Aaron Coppin, of Wenona, Ills., is on the programme for an essay on the subject of "Bees on the Farm," to be given before the Marshall County Farmers' Institute, which meets in Armory Hall, at Wenona, on Feb. 2nd and 3rd. Wish we could be there and hear that essay. Perhaps Mr. C. will send it to us for publication in the BEE JOURNAL.

Great Premium on page 133!



Section Holders—Wide Frames and How to Use Them.

Written for the American Bee Journal

BY G. M. DOOLITTLE.

A correspondent writes me thus: "I wish to change my surplus arrangement next season to some extent, and as I wish to do it this winter, while I have leisure, will you kindly tell me something of what you prefer, and how you make and use it? Please reply through the AMERICAN BEE JOURNAL, as I am taking that excellent paper."

After trying nearly all of the section-cases advertised, I have come to the conclusion that wide frames, holding but one tier of sections, give the best results with the least work, trouble and annoyance, taking all things into consideration.

Wide frames, two or more tier of sections high, to be used in the upper story of a two story hive, do not work at all satisfactory with me, so I have discarded them entirely for that purpose. However, I find them very handy when hiving large swarms, where such frames of sections are placed at each side of the hive to take the place of the number of frames which we do not wish to use when working on the contraction plan, using these instead of the dummies which are usually used in contracting hives.

These wide frames are hung in the hive with separators toward the combs or frames of foundation, and it is a rare instance that I get either brood or pollen in them. These wide frames are left in the hive for 24 days, or until they are filled, when they are taken out to give place for empty combs, which are used to fill out the hive so there will be stores enough for winter, thus securing the lighter colored honey for market, while the bees winter on darker honey gathered later on, which is just as good for the bees, but not as salable to customers.

If all are not filled when taken out, that portion of them are placed on top, in the one-tier wide frames which are used there, and left to be finished. This makes some work, but as such are only used on very large colonies, but little of this changing of sections is required, as they are generally completed at the end of 24 days, or before, so that it is no more work to handle wide frames of sections than it would be dummies.

Some one may ask, How about tiering up? I do not like tiering-up, and never did, though using it in the past to considerable extent, for by this plan I am liable to have too many partly-finished sections, especially if the season be a little poorer than we expected. However, the wide frames, as I use them, can very easily be made to tier up. A brief description of what I prefer is as follows:

Make wide frames to accommodate the number of sections you desire, consistent with the top of the hive and size of section. I use four sections in a frame. Next, make two boards of the same length and height of the wide frames, cleating them to prevent warping. Drive a nail into each end of one of these boards, letting it project one-fourth inch, and a large, flat-headed tack into each end of the other, driving it in so that by winding a string around once or twice it will hold the string as in a vise.

Now procure some coil wire springs, about three-sixteenths of an inch in diameter, and tie a short string by making a slip-knot, or otherwise, to the spring and to the nail driven in the first little board, and then tie the longer string to the other end of the spring. I use one 20 inches long. Put the wide frames on the hive, two, three, five, seven or ten, as you wish, set one of the little boards up on each side, draw the springs at each end until a strong tension is made, and wind strings around between head of tack and board to fasten, when you have an arrangement that you can enlarge or contract, invert or tier up, as you please, and one which I consider superior to anything yet brought before the public in the shape of a surplus arrangement for comb honey. For practical work I use it as follows:

When the honey season opens, I put from two to five wide frames on each colony, according to size, being careful not to give too much room at first, so as to discourage the bees on the start. In a week or more, add two more wide frames, one on each side, and so on until the full capacity of the hive is reached, according to the room on the top, always putting them on the outside. As I use chaff hives largely, this gives room of about 60 pounds capacity, which is all that is required by the largest colonies, while many colonies do not require more than from 30 to 50 pounds capacity, when worked on this "lateral" plan, as some term it.

As soon as the first sections are completed, they are taken off, the remaining wide frames crowded to the center, and empty sections put on the outside as before. As the season draws toward a close, calculations are made so as to get all as nearly completed as possible, and to accomplish this, no empty sections are put on to take the place of the full ones taken off, so that at the end of the season the number is about the same as it was at the beginning, nearly all of which are generally finished. Should any remain unfinished, the honey is extracted from the combs, the sections given to the bees to lick dry of honey, when they are stored away as "bait sections" for the next year. The few that are not filled, I consider of great value when used in this way, for by so doing the bees are started to work in the sections much earlier in the season than they otherwise would be.

Borodino, N. Y.

Canadians Blow Up the Sugar-Honey Magazine.

Written for the American Bee Journal

BY WM. M'EVOY.

At the annual meeting of the Ontario Bee-Keepers' Association, held in Walkerton, a committee was appointed, composed of Messrs. S. T. Pettit, of Belmont, James Frith, of Princeton, and J. K. Darling, of Almont, to go to Ottawa and get an Act passed against the manufacture, importation or sale of "sugar comb honey."

Mr. Pettit, the chairman of the committee, has the Bill prepared, making it a very serious business for any person to make, buy or sell sugar comb honey. The fines are to be $400, which I believe are none too much when we consider how easy it would be to ruin the real honey producers' business by such work. If the feeding of sugar for the production of comb honey got started, it would end in putting the feeders on the crates of sections, and then feeding the very cheapest grades of sugars.

It was too bad to ever start such a subject in any periodical, to advise bee-keepers to feed sugar for such a fraudulent purpose, because it would be nothing but fraud to sell such for honey. I do not mean to say that these men that pushed the sugar comb honey so to the front would even try to push anything that they did not believe to be strictly honest; these men that gave that advice did it with the very best of intentions to help bee-keepers in poor seasons, believing that bees make honey out of sugar, which I positively declare they cannot.

Woodburn, Ont., Jan. 16, 1893.

[We are glad that our Canadian friends are moving in this matter. Let every bee-keeper, as well as all bee-conventions, condemn the very suggestion of such a thing as feeding sugar for the production of honey, whether comb or extracted.

Nothing, it seems to us, could more completely and speedily wipe out the business of honest honey production, than sugar-honey making. Because those who proposed the scheme were sincere in their desire to aid bee-keepers, it does not lessen the stupendous damage bound to result from what has been so unwisely published and advised upon the subject. We have heard of a man who couldn't open his mouth without putting his foot into it; in this case it seems that the champions of the sugar-honey scheme, opened their mouths and then put in *both feet*. It will be a long time before they get over the effects of that mouthful!

You can count on the old AMERICAN BEE JOURNAL as dead against all such schemes, every day in the week.—ED.]

A Good Reason Why Bees Don't Pay Sometimes.

Written for the American Bee Journal

BY CHARLES E. FALKNER.

The past season was a total failure as regards surplus honey. From 34 colonies I obtained no surplus honey to speak of. The spring of the year was very wet, and all during fruit-bloom and up until white clover commenced to bloom; so much so that the bees scarcely made a living.

White clover and basswood furnished a sufficient nectar for the bees to fill their brood-chambers, providing they did not swarm. I kept mine from swarming, and consequently they went into winter quarters in splendid condition.

I always see that my bees have plenty of stores to take them through the winter safely before I ever attempt to take a single pound of their faithful labor, which, I think, is right and just. I know of plenty of so-called bee-keepers that in the fall of the year take the last pound of surplus, and often rob the brood-chamber by extracting the well-filled outside combs, and never attempt to feed the bees; and those are the ones who expect to receive the largest returns from their bees the coming summer! If they fail, they are ready to say that it don't pay everybody to bother with bees at all. Well, I don't wonder much why it don't pay in their haphazard ways of management; but I do wonder why they are so hasty in saying that it don't pay anybody to keep bees at all, just because they failed in their poor way of doing business.

I don't wish to be understood that I think it would pay a farmer to adopt farming and take up bee-keeping entirely, nor would I advise anybody to do so, for the reason that past experience has taught us that we cannot always depend upon a honey-flow each year in succession; neither would a farmer dare to depend upon raising wheat or corn, and nothing else on the farm, as I fear he would be "left" fully as often, and if not more so, then the bee-keeper would.

Now I would say to those that think it doesn't pay to bother with bees, to purchase one or two good, strong colonies of Italians, and send $1.00 for the AMERCAN BEE JOURNAL, and by the time they have 20 or 25 good colonies of bees, they will have a pretty good idea of the business, and will more than doubly be repaid for their time and capital invested. They will also dismiss the false idea that it doesn't pay anybody to keep bees at all.

Twenty or 25 colonies can be successfully managed by a man who is farming but 30 or 40 acres of land, and they will pay him well for the little extra bother.

TO RID HIVES OF ANTS.

I noticed on page 828 that Mr. Kauffman, of Brickersville, Pa., says he is bothered with little ants around the bee-

hives, and that he has tried everything given in the BEE JOURNAL, and it did not destroy them. I never try to destroy them; I simply keep them away from my bee-hives by taking a good bunch of tansy, and mash or bruise it by rubbing it on the outside of the hives and the inside of the cover, and scatter some of it on the cloth over the bees. Be sure to try it the coming summer, and report in the BEE JOURNAL.

Pioneer, Ohio.

☞ Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

Gathering Pollen.

Many colonies of my bees are ventilating, denoting strength. Considerable pollen is gathered now. The weather permitting, I expect early swarms.

M. H. MENDLESON.

Ventura, Calif., Jan. 2, 1893.

Reminded of the Winter of 1880-81.

The weather for the past few days are reminders of the winter of 1880–81—20 to 22° below zero. That winter the loss of bees was great, and if the winter continues for any length of time as it has been, I fear there will be a serious loss this winter. But we will hope for the best.

H. H. BROWN.

Light Street, Pa., Jan. 17, 1893.

Winter Packing-Cases—Top-Bars.

In Mr. Green's article on page 22, he says there are pronounced advantages in making a packing-case large enough to hold several colonies, and that his new packing-cases hold four. Now if they held eight, having two entrances at each side and each end, there would be still greater advantage, as there would be more economy of heat, and only a trifle over one-half more labor, packing material, and lumber required. The roof could be made of half-inch cedar or pine lumber, 10 or 12 inches wide, and nailed to three hardwood rafters for each side of the roof, one inch square, with 2½ inch wire nails well clinched. The two sides of the roof may be hinged at the ridge with three strap hinges, one at the center, and the other two near the ends, just over the rafters, and nailed on with three-inch wire nails instead of screws.

There is another point I should like to make in regard to making a bee-space at the ends of top-bars, which can be done by rabbetting out ⅛-inch instead of ⅝, and having the sheet-iron rest raised ⅛-inch above the shoulder, thus leaving a bee-space of half an inch all around the projecting end of the top-bar, and so avoiding all propolization during the use of the hive.

R. F. WHITESIDE.

Little Britain, Ont., Jan. 13, 1893.

The Season of 1892—Wintering.

I put 73 colonies of bees into the cellar in the fall af 1891. They were light in stores, but all wintered well except 2 colonies. I put them out on April 5, 1892. It was fine weather, but in a few days it turned cold and windy, and it rained, and rained, and the east wind blew ice cold for 31 days. I could not look at my bees all of this time, as it was so cold and windy, and when the first warm day came, that was on Sunday, they commenced swarming out about 9 o'clock in the morning. I had fed all of these colonies well, and they all had plenty to eat; all had brood and good queens. I put some of them back six times into the one hive, and the first thing I would know they would be out on the wing. So they swarmed out until I had 36 colonies left out of 73. I then gave the 36 the very best of care, and got 1,200 pounds of comb honey, all nice and white. I now have 58 colonies.

My neighbor had 11 colonies, and he came to me and wanted to know if I would help him kill his bees, and take my extractor and extract the honey. I told him I thought it was wicked to kill the bees that way. I offered to buy his bees, and he said all right, he would sleep over it. They were in Root's ten-frame hives. I weighed some of them, and they weighed from 66 to 70 pounds each. I got them for $3.00 per colony, and I let my neighbor have 2 colonies out of the 11 I bought. The one I bought

the bees of got only 60 pounds of honey in sections. He used no foundation in the sections. He has 13 acres in small fruit, and won't keep bees. I have 68 colonies in my cellar this winter in the very best condition, and they are wintering finely. I have lost only 2 colonies in cellar wintering for 6 years. I think I have one of the very best plans for Minnesota wintering.

C. A. GOODELL.

Mankato, Minn., Jan. 10, 1893.

Bees Wintering Nicely.

My 27 colonies of bees are wintering nicely. The honey crop was very light last year—about 300 pounds from 22 colonies. I took out 6 pounds to-day, of tolerably fair honey. The prospects are good for next season.

JOHN M. RYAN.

Apple Grove, Ala., Jan. 6, 1893.

Good Cure for the Blues, Etc.

I wonder if the most of the readers of the AMERICAN BEE JOURNAL have learned by personal experience that these words by our Lord Jesus were true, that it is "more blessed to give than to receive." It is true, I am sure it is true. I know from experience. I don't believe there is a better cure for the blues than to go to work with all one's might to help some one more unfortunate than ourselves.

If we are too poor to have much money to give, there are thousands of other ways of doing good. Jesus said: "Gather up the fragments, that nothing be lost." In almost every home there is clothing that we can spare as well as not, and if mended and laid away in a box kept for that purpose, it would grow beautifully full before the year closed. There are thousands of such homes where such clothing would make happy hearts.

Some people say, "Oh! I would not hurt people's feelings by offering them such clothes!" I would not give to such people as are too proud to receive them. I can tell you where you can send such clothes, and they will be very thankfully received. It is to a Christian Indian Orphanage, that has been recently established at Swenndale, near Vinita, Indian Territory, under the care of Evangelist Wolf. I could mention many other places, did space permit.

Bees in this vicinity are wintering well, I think; especially those in the cellar. The bees out-of-doors have not had a good flight for about eight weeks, but the weather has not, until now, been severe on them—not much cold winds thus far this winter, which is, I think, harder on bees out-of-doors than quite cold weather. White clover, also, seems all right.

I wish to thank the editor for the honor conferred upon me by placing at the head of the editorials, on page 719 (1892), the poetry ending with letters, copied from *Gleanings*. Honesty suggests to me that I should write and inform the readers that it was not my own composition. I found the lines in "The Yankton Student," as selected poetry; no name given. I thought it applicable to our beloved pursuit, and so I quoted them.

MRS. L. C. AXTELL.

Roseville, Ills., Dec. 14, 1893.

Severe Winter in New York.

We have had the most severe winter here since the 23rd day of December, that I ever remember at this time of the year. On the day alluded to, the wind sprung up from the northwest, whirling snow filled the air, roads were blockaded, and the mercury sank to below zero, so each one of us had our Merry Christmas around our own fires, and the many Christmas trees, houses, boats, etc., were nearly or quite failures.

On New Year's day it thawed just a little bit near night, but the next day found us in the midst of another zero wave, and the mercury has scarcely been above since, staying from 2° above to 6° below, with high winds most of the time. There is about 14 inches of snow on a level in the center of large pieces of woodland where the wind cannot reach, but elsewhere the lots are bare, with the snow-drifts anywhere from 2 to 10 feet deep behind fences, in the roads, etc. I have been four days shoveling on the roads, and now they are hardly passable, in many places.

All of my bees are in the cellar except 7 colonies, I was in there two weeks ago, and those in it were very nice, so I have no fears for them.

G. M. DOOLITTLE.

Borodino, N. Y., Jan. 18, 1893.

Please Send Us the Names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you, and secure some of the premiums we offer.

AMERICAN BEE JOURNAL

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Wallace Porter Dec93
Suffield, Portage co, Ohio

CONVENTION DIRECTORY.

Time and place of meeting.

1893.
Feb. 7, 8.—California, at Los Angeles.
John H. Martin, Sec., Redlands, Calif.

April 5, 6.—Texas State, at Greenville, Tex.
A. H. Jones, Sec., Golden, Tex.

May 4.—Allegany Co., at Belmont, N. Y.
H. C. Farnum, Pres., Transit Bridge, N. Y.

☞ **In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.**

North American Bee-Keepers' Association

PRESIDENT—Dr. C. C. Miller....Marengo, Ills.
SECRETARY—Frank Benton, Washington, D. C.
TREASURER—George W. York...Chicago, Ills.

National Bee-Keepers' Union.

PRESIDENT—James Heddon..Dowagiac, Mich.
SEC'Y AND MANAGER—T. G. Newman, Chicago.

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The Apiculturist	1 75	1 65
Bee-Keepers' Guide	1 75	1 65
American Bee-Keeper	1 50	1 40
Canadian Bee Journal	2 00	1 75
Nebraska Bee-Keeper	1 50	1 35
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and Langstroth Revised (Dadant)	2 40	2 25
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Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

Honey & Beeswax Market Quotations.

The following Quotations are for Saturday, January 28th, 1892:

CHICAGO, ILL.—There are occasional sales of best grades of comb honey, but the retailers are not yet sold out on supply laid in before the holidays. Prices are a little easier, especially on that which will not grade "fancy"—such brings 17@18c., and other grades 12@16c. Extracted, 6@9c., as to quality.
Beeswax—22@25c. R. A. B. & Co.

CHICAGO, ILL.—Fancy stock is very scarce, with plenty of inquiry, with good prices offered for same. It sells readily at 18c.; No. 1 comb, 16@17c. Dark sells slow. White extracted, fair supply, with good demand at 8½; dark, 6@7c. Beeswax—23@25c. J. A. L.

CINCINNATI, OHIO.—Demand from manufacturers, for extracted honey, was slow for the last few weeks, while there was, and is still, a fair demand from consumers for family use. There is no choice comb honey in the market. Best white comb brings 14@16c. Extracted honey brings 6@8c.
Beeswax—Demand fair, at 23@25c. for good to choice yellow. Supply good. C. F. M. & S.

NEW YORK, N. Y.—Demand for comb honey is very light, White fancy stock is well cleaned up. The market is well stocked with off grades and buckwheat, and prices are irregular. Extracted is in good demand and stocks are light. We quote: Basswood and white clover, 8@8½c.; buckwheat, 6@6½c.; Southern, 70@75c. per gallon.
Beeswax—25@27c. H. B. & S.

SAN FRANCISCO, CALIF.—Choice extracted is scarce at 7@7½c., and demand heavier than supply. Choice comb is not scarce at 10@12c., according to quality, 1-lbs. Beeswax is neglected at 22@23c. S., L. & S.

BOSTON, MASS.—Comb honey is selling slow, very much slower than we like to have it, and it is our experience that when we start honey in at a high price, it sells hard right through the season. We quote our market nominally at 17@18c. for best white honey, 1-lb. combs. Extracted, 8@9c.
Beeswax—None on hand. B. & R.

KANSAS CITY, MO.—Demand good, supply very light. White 1-lbs., 16c. Extracted, 6@7c. No beeswax on the market. H. & B.

MINNEAPOLIS, MINN.—The market is good. We quote: Fancy white clover 1-lbs. sell fast at 18c.; 2-lbs. 16@17c. Buckwheat, comb, 13@14c. Extracted, in barrels, 7@8c.; in 5 or 10 lb. kegs., 9@10c. J. A. S. & C.

KANSAS CITY, MO.—Receipts and stocks very light, demand good. We quote: No. 1 white 1-lbs. 16@17c.; No. 2, 14@15c.; No. 1 amber 1-lbs. 15c.; No. 2 amber, 10@12c. Extracted, white, 7@7½c.; amber, 5@6.
Beeswax—20@23c. C.-M. C. C.

ALBANY, N. Y.—Our honey market is slow on account of cold weather, but our stock was never so light as now. We have less than 50 cases of honey on hand, and only one barrel of extracted; when usually we have 1,000 cases in stock. For honey not granulated in comb, we quote: White (small), 15@18c.; mixed 13@14c.; dark, 10@11c. Large comb and double glass sell for 1 to 2c. less per lb. Extracted, white, 8¼@9c.; amber, 7¼@8c.; buckwheat, 7@7¼c. H. R. W.

List of Honey and Beeswax Dealers,

Most of whom Quote in this Journal.

Chicago, Ills.

R. A. BURNETT & Co., 161 South Water Street.
J. A. LAMON, 44 & 46 South Water Street

New York, N. Y.

F. I. SAGE & SON, 183 Reade Street.
HILDRETH BROS. & SEGELKEN, 28 & 30 West Broadway.

San Francisco, Calif.

SCHACHT, LEMCKE & STEINER, 10 Drumm St.

Minneapolis, Minn.

J. A. SHEA & Co., 14 & 16 Hennepin Avenue.

Kansas City, Mo.

HAMBLIN & BEAHSS, 514 Walnut Street.
CLEMONS-MASON COM. CO., 521 Walnut St.

Albany, N. Y.

H. R. WRIGHT, 326 & 328 Broadway

Hamilton, Ills.

CHAS. DADANT & SON.

Cincinnati, Ohio.

C. F. MUTH & SON, cor. Freeman & Central avs.

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"Bees and Honey"—page 133.

Wants or Exchanges.

Under this heading, Notices of 5 lines, or less, will be inserted at **10 cents per line**, for each insertion, when specially ordered into this Department. If over 5 lines, the additional lines will cost 20 cents each.

WANTED—A male or female who understands Bees, to start a new apiary. State experience and wages desired.
J. B. Summers, Berthoud, Larimer Co., Colo.

WANTED—A situation in an Apiary or in a Hive Manufactory, by a practical apiarist. 12 years' experience.
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